



Robotics Academy 2012 Applicant Form

June through August 2012

This application is only for students wishing to participate in the Robotics Academy Program held at NASA Ames Research Center in Northern California. This data will *not* be shared with other NASA internship programs.

Principal Requirements

In order to be considered for the program, applicants must:

- Be a U.S. Citizen or have a valid Green Card indicating you are a United States Permanent Resident
- Be 18 years of age by June 1, 2012
- Be a High School graduate, or have a GED certificate
- Have adequate medical insurance – a signed, legal certification will be required
- Be attending or enrolled in an accredited university, college, technical trade school
- Receive financial support from your local State Space Grant foundation or consortium, or an approved non-profit, university, or corporate sponsor - \$3000 minimum

Desired Qualifications

The ideal candidate will have strong academic achievement in math, science, and technology, and formal experience in the field of robotics.

Eligibility and Contact Information

1. Student Information:

First Name: _____

Middle Name: _____

Last Name: _____

Email: _____
(Provide an email address that you will check regularly and that will serve as a reliable means of communication before, during, and after the Academy.)

Home Phone: _____ Mobile Phone: _____

Other Phone: _____
(Provide a number(s) that is checked regularly and that can receive messages.)

2. Citizenship and Location:

Citizenship: _____ Home State: _____

If you are a Permanent Resident, then provide the following:

Card Number: _____ Country of Origin: _____

If you are not a U.S. Citizen then STOP. Non-U.S. Citizens and non-Permanent Residents are not eligible for this program.

3. Demographics:

Age as of June 1, 2012: _____ Gender: _____ Race: _____

Disabilities: _____

4. Academics:

Academic/Grade Level (You will enter Fall 2012): _____

Are you a full time student? _____

Overall GPA/Major GPA/GPA Scale (i.e. 3.4/3.6/4.0): _____

College/University Name: _____

Street: _____

City: _____ State: _____ Zip: _____

Major(s):

<input type="checkbox"/> Computer Science	<input type="checkbox"/> Mechanical Engineering
<input type="checkbox"/> Computer Engineering	<input type="checkbox"/> Chemical Engineering
<input type="checkbox"/> Electrical Engineering	<input type="checkbox"/> Aeronautical Engineering
<input type="checkbox"/> Robotics Engineering	<input type="checkbox"/> Materials Science
<input type="checkbox"/> Physics	<input type="checkbox"/> Mathematics
<input type="checkbox"/> Chemistry	<input type="checkbox"/> Other (Please List) _____

Minor(s):

<input type="checkbox"/> Computer Science	<input type="checkbox"/> Mechanical Engineering
<input type="checkbox"/> Computer Engineering	<input type="checkbox"/> Chemical Engineering
<input type="checkbox"/> Electrical Engineering	<input type="checkbox"/> Aeronautical Engineering
<input type="checkbox"/> Robotics Engineering	<input type="checkbox"/> Materials Science
<input type="checkbox"/> Physics	<input type="checkbox"/> Mathematics
<input type="checkbox"/> Chemistry	<input type="checkbox"/> Other (Please List) _____

Can you support the 2012 Robotics Academy schedule? Y / N

If not, please explain: _____

Coursework and Core Competencies (Please select those you have studied)	Formal	Self-Taught
Calculus (Differentiation and Integration)		
Calculus (Limits and Series)		
Calculus (Multi-Dimensional)		
Differential Equations		
Thermodynamics		
Heat Transfer		
Dynamics		
Kinematics		
RF Propagation and Antennas		
Controls		
Embedded Systems		

Operating Systems		
Algorithms		
Databases		
Distributed Computer Systems		
Computer Networks		
Artificial Intelligence		
Physics (Newtonian)		
Physics (E & M)		
Physics (Oscillations and Waves)		
Digital Circuit Design		
FPGAs		
Object-Oriented Programming		
Computer Vision		
Manipulators		
Real-Time Programming		
Multi-threaded / Multi-process programming		

5. Legal Home Address:

Street: _____

City: _____ ST: _____ Zip: _____

I will be living at this address from June-August 2012: Y / N

I will need assistance finding housing near Mountain View if accepted: Y / N

Relevant Programs, Skills, and Experience

6. Have you actively participated in any of these robotics programs?

NASA Ames Robotics alumnus: Year(s) _____

FIRST:

Year(s) _____ Location _____ Team # _____

Botball:

Year(s) _____ Location _____ Team # _____

VEX:

Year(s) _____ Location _____ Team # _____

MATE Competition:

Year(s) _____ Location _____ Class _____

BEST Robotics:

Year(s) _____ Location _____ Team # _____

Other (Describe): _____

7. Skills

Operating Systems Development—I would feel comfortable developing for:

_____ Windows	_____ FreeBSD
_____ Linux	_____ Another *Unix Environment
_____ Other (Please List) _____	

Operating Systems—I would be comfortable using the following for work:

_____ Windows	_____ FreeBSD
_____ Linux	_____ Another *Unix Environment
_____ Other (Please List) _____	

Programming Languages I have experience with and am proficient:

_____ C (Focus on Embedded)	_____ Java
_____ C++	_____ Python
_____ mySQL	_____ VHDL or Verilog
_____ Other (Please List) _____	

Other Skills	Proficient	Have Experience
Welding (Steel)		
Welding (Aluminum)		
CAD (Solidworks)		
Soldering (Surface mount)		
Design of basic circuits		
Soldering (Through Hole)		
Matlab		
PCB Design		

8. Awards List – Professional, Academic, Social, Personal

9. Professional Memberships, Certifications, Honors Societies, IEEE, Amateur Radio License, etc.

10. Published Works and Patents

11. Extra-Curricular Activities

12. What do you like to do in your spare time?

13. Please describe your experience with anything mechanical: robots, vehicles, school projects, any hands-on experience.

Short Essay Questions

(We seek quality, not word count.)

14. What personal core values do you feel you most fully represent and bring to the table in a team? How do you exemplify them?

15. What do you feel is the toughest problem (engineering, science, math, or any other “problem”) you have solved either by yourself or in a team? Describe this problem and how you solved it.

16. As a member of an engineering team, in general, describe which role you tend to fall into and see yourself in. (Keep in mind, what you *tend* to do and what you *would like* to do may be different.)

17. Describe what you feel are your main strength and your main weakness in a team and in relation to others in general.

Letters of Recommendation

18. Please list 3 references we can contact that can attest to your academic, technical, and personal accomplishments. Also, please have them email a letter of recommendation to ARC-RoboAcad@mail.nasa.gov:

1. Name: _____
School/Company/Institution: _____
Address: _____
City: _____ ST: _____ Zip: _____
Email: _____
Phone: (____) _____ - _____
Title / Relationship: _____

2. Name: _____
School/Company/Institution: _____
Address: _____
City: _____ ST: _____ Zip: _____
Email: _____
Phone: (____) _____ - _____
Title / Relationship: _____

3. Name: _____
School/Company/Institution: _____
Address: _____
City: _____ ST: _____ Zip: _____
Email: _____
Phone: (____) _____ - _____
Title / Relationship: _____

Important!

- Please include a copy of your resume and unofficial transcript.
- The student applicant must sign this application.
- The student applicant must submit this application via U.S. mail.

By signing below, I certify that all information stated in this application is accurate.

Student Applicant Signature: _____ Date: _____

Submit completed applications to Drew Price and Jenny Yang:

Mail
NASA Ames Robotics Academy
NASA Ames Research Center
Mailstop T28B RM101
Moffett Field, CA 94035

Please direct all inquiries to Drew Price:

Email
ARC-RoboAcad@mail.nasa.gov